



INITIATIVE 3: DEVELOP CONSISTENT DATA AND REPORTING

PRACTICES IN OTHER AREAS AND POTENTIAL MA IMPROVEMENTS

In order to make effective decisions about where and how to fund, manage and deliver public transit services, planners and decision-makers need to have accurate, reliable data on which to base decisions. At the federal level, transit providers receiving federal assistance are required to submit annual operating and financial statistics to the National Transit Database (NTD). This database serves as a repository for transit data from public transit providers across the country. Many states also utilize data that is either directly drawn from NTD, or similar to it, in order to better understand the unique characteristics of their individual operators, and to evaluate ongoing system performance. Some states go beyond the requirements of NTD and collect additional data on grant expenditures, asset condition and other transit system characteristics. At the local level, most providers monitor their own operating statistics to evaluate the effectiveness of individual services and to make modifications and service adjustments on a periodic basis.

Perhaps, most importantly, reporting of transit operating data and financial statistics to both federal and state funding agencies provides public transparency and helps to monitor and demonstrate fiscal responsibility and effectiveness on behalf of the taxpayer and customer. In many states, additional data beyond basic operating and financial statistics are frequently used to support other state DOT roles such as evaluating the overall quality of service and helping to make funding decisions. These states are able to make informed, data-driven investments that further advance statewide goals for transit and are able to demonstrate their success and progress to the public.

NATIONAL TRANSIT DATABASE

By law, all transit providers¹ that receive Federal Transit Administration (FTA) Section 5307 (Urbanized Area Formula Program) or Section 5311 (Other than Urbanized Area Formula Program) funds are required to report certain summary-level data to FTA's National Transit Database (NTD).

Reporting takes place both annually and monthly, and is intended to provide a national summary of transit and safety statistics. The primary purpose for collecting this data is to allow FTA to determine how to apportion more than \$5 billion in Urbanized Area funds among more than 450 urbanized regions. NTD summary reports are also submitted to Congress each year. In order to compare data across so many individual agencies, NTD collects a variety of information, including, but not limited to, the following:

- Agency information
- Service data, such as service miles and hours
- Performance data, including ridership and fares collected
- Financial data, including operating expenses and sources of funding
- Facility and fleet data
- Employment data

Most data is collected by service mode (for example, demand-responsive, local bus, commuter rail, light rail, etc.) and by operating type (either Directly Operated – that is, operated by the agency itself – or Purchased Transportation, provided through a contract by another entity). Agencies operating fewer than 30 vehicles

¹ Over 660 transit providers in urbanized areas around the United States currently report to NTD.



have greatly reduced reporting requirements. Reporting waivers and extensions are also granted in certain cases, to provide relief in the event of natural disasters, transit strikes, etc.

Annual reports encompass all of the above data, whereas monthly reporting includes only a basic set of data, chiefly service data and ridership. NTD schedules its reporting cycles to accommodate agencies' fiscal years, which may differ from agency to agency. NTD reporting deadlines are set no earlier than 120 days after the end of agencies' fiscal year-ends. For example, agencies with a fiscal year-end date that falls between April 1 and June 30 must report by October 31 of the following year. Agencies are also given an additional three months thereafter to submit any final revisions to data. All data is submitted electronically.

NTD oversees the process of collecting this data from transit agencies and makes the data available online for public use. There is a relatively significant delay before this data is made publicly available; data for a given calendar year is typically available about one year later. Historical data sets are also available, meaning that NTD can be a good source of information about how services have evolved. However, as described later in this document, there are a number of important limitations to NTD data that often hinder its usefulness.

REPORTING REQUIREMENTS IN PEER STATES

Washington

Every year, the Washington State Department of Transportation (WSDOT) collects transit agency data and publishes a *Summary of Public Transportation* that documents the status of public transit throughout the state. For accurate reporting in the *Summary of Public Transportation*, WSDOT works closely with the Washington State Transit Association, which represents the majority of public transportation systems in the state. Together, they have developed a standard template for reporting data.²

The data collected is not used as part of budgeting, grant selection, or other decision-making processes, but is presented to the public as part of the *Summary of Public Transportation*. Data collected includes:

- Farebox recovery ratio
- Operating cost per passenger trip
- Operating cost per total vehicle hour
- Operating cost per revenue vehicle hour
- Revenue vehicle hours per total vehicle hour
- Passenger trips per revenue vehicle mile
- Revenue vehicle hours per full-time equivalent employee
- Passenger trips per revenue vehicle hour
- Operating cost per revenue vehicle mile
- Revenue vehicle miles per revenue vehicle hour

WSDOT has tried to make the process of reporting data as user-friendly and seamless as possible and has worked steadily to improve its reporting systems. Prior to 2007, a Microsoft Access database had been used to tabulate data, and transit operators submitted data through a set of forms. This system was inefficient and cumbersome for operators and the state; for example, every year as transit service data definitions and requirements evolved, forms would have to be revised and the Access database had to be modified to accommodate them, leading to inconsistencies from year to year.

² The Transit Summary for 2010 is available online at:

www.wsdot.wa.gov/publications/manuals/fulltext/m0000/TransitSummary/2010PTSummary.pdf



In 2008, as part of an outside review focused on standardizing cost allocation procedures, WSDOT identified significant overlap and conflicts in the reporting required to both the state (for Transit Development Plans (TDPs) and the Summary of Public Transportation) and for NTD. As a result, WSDOT began to streamline the data reporting process. This involved realigning the reporting deadlines and refining how financial and operating data were reported. Among the benefits of improvements in reporting included:

- Irregularities in data were more easily identified.
- Data definitions became more uniform and more consistent with each agencies' other reporting obligations to NTD and TDPs.
- "Other" data was no longer allowed without some explanation or discussion.
- Transit operators were able to report data in more disaggregated formats (such as Directly Operated versus Purchased Transportation, as it is reported to NTD), which allowed them to skip steps requiring aggregation. The state later handled data re-aggregation in the format that it preferred.

Washington

Best Practices

- Annual Summary of Public Transportation report
- Process streamlined to be more consistent with other state and federal reporting requirements
- Online, consolidated web-based data reporting system
- Explicitly defined data definitions

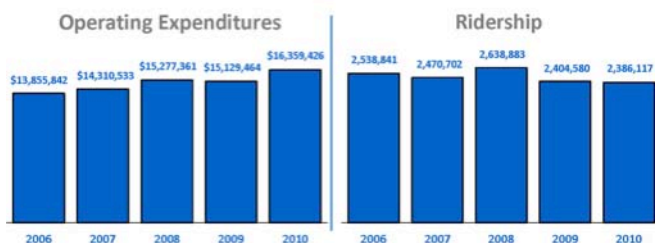
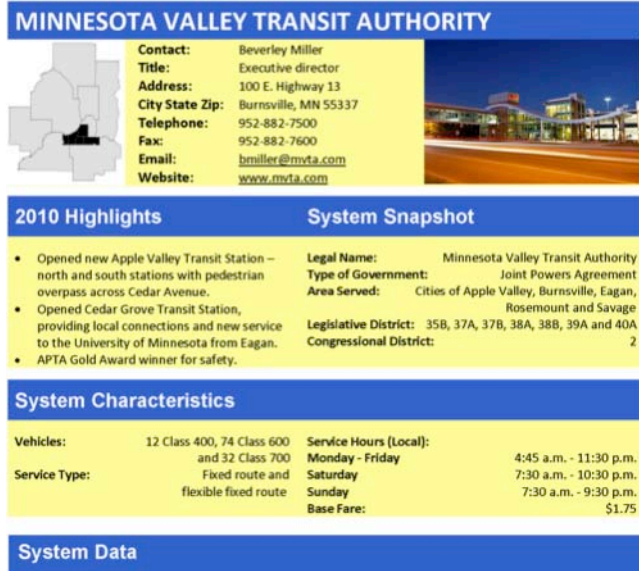
In 2010, WSDOT created an online collection form that has made collecting data very efficient, allowing operators to report to a software-independent central database directly and consolidating previously separate forms for financial, operating, and system overview data.

Minnesota

Minnesota DOT (Mn/DOT) provides technical assistance to each of the 59 transit providers outside the Twin Cities region. Each year, the agency distributes more than \$28 million in funding to these providers from its general fund and vehicle sales tax. Agencies apply annually for operating, capital and planning funding. In about 2001, the state shifted its goal away from providing transit service in every county in the state (a coverage model goal) to providing for 80% of total transit need (a productivity model goal) by 2015, and 90% of need by 2025. To help support the state's progress toward this goal, the state now makes funding decisions based on transit service performance, rather than according to a set funding formulas as many states do.

To assist the state in progressing toward its goals, the Mn/DOT Commissioner presents the annual Greater Minnesota Transit Report to the state legislature, detailing the current state of transit services outside of the Twin Cities metropolitan area. The report focuses on the state of the industry, transit system performance, agency financial data, and transit system needs. The report serves not only as an update on transit operators' performance overall, but also provides the basis for the state to evaluate ridership trends

Figure 1: Greater Minnesota Transit Report-Agency Snapshot





and service productivity to make funding allocation decisions.

To assess the performance and cost-effectiveness of each transit agency, Mn/DOT's Office of Transit uses four measures:

- Passengers per service hour
- Cost per service hour
- Cost per passenger ride
- Farebox recovery ratio

These measures are reported by individual providers and tracked over time to observe trends and overall growth and declines. The data is used to plan for future demand, as an opportunity to identify agencies that are underperforming (and then provide technical assistance), and meet the state's goals for meeting public transportation needs. (An additional review of Mn/DOT's use of data for service evaluation is included in *Initiative 1 – Develop Service Standards & Guidelines*.)

Minnesota Best Practices

- Performance measures reported
- Data summarized in annual statewide report
- Agencies evaluated against peer groups to make comparisons
- Data used to make funding decisions
- Data allows Mn/DOT to provide technical assistance to underperforming services

Oregon

The Oregon Department of Transportation (ODOT) collects data directly from its transit providers on a quarterly basis. The reports collect basic transit operating data, and are ultimately used by ODOT to create performance metrics to evaluate system performance. The information is used to monitor transit activities, grant expenditures and project progress. Reports are not published on the ODOT website, but are presented to the Legislature.

A quarterly reporting schedule is used instead of a monthly schedule because it is seen as being less intrusive for agencies, but is frequent enough to allow the state to collect data in a timely manner. All transit agencies who receive state funding for transit are required to complete these reports.

The quarterly reports are composed of separate Microsoft Word- and Excel-based forms, which are filled out by the individual transit providers and submitted electronically to ODOT. The process for filling out these forms is clearly documented in an on-line guidebook (see link at end of this document), with all terms and procedures explicitly defined. In addition to a wide range of supporting documentation, there are two main forms that agencies must submit:

- **Agency Quarterly Report:** The quarterly report form is the basic form used by all grantees to report on the previous quarter. The form is five pages long and includes a mix of checkboxes and text-fields. The form

Figure 2 Sample Page from Oregon DOT Transit Agency Quarterly Report

Current Period Information			
Volunteer & Non-Cash Resources			
Does your organization use Volunteers?			<input type="checkbox"/> Y <input type="checkbox"/> N
If Yes, please complete the following:			
Type of Volunteer	No. of Hrs	Unit Value	Total Value
Drivers		\$	\$ 0.00
Scheduler/Dispatcher		\$	\$ 0.00
Office help		\$	\$ 0.00
Vehicle maintenance (washing, etc.)		\$	\$ 0.00
Contributed professional services such as legal, accounting, advertising, other (list):		\$	\$ 0.00
Other in-kind/donated services or materials/supply (list):			\$
Total			\$0.00
Service Data			
Type of Service	Fixed Route	Other Than Fixed Route	Total
Total Passenger One-Way Rides			0
Elderly & Disabled One-Way Rides			0
Revenue Service Hours			0
Revenue Service Mileage			0
Revenue & Expense Information (Enter "0" for blank cells. Do not leave empty.)			
Type	Current Period	Total to Date	
Fare Revenue	\$0.00	\$0.00	
Contract Revenue	\$0.00	\$0.00	
Other Program Income	\$0.00	\$0.00	
PTD Federal Assistance	\$0.00	\$0.00	
Other Federal Assistance	\$0.00	\$0.00	
PTD State Assistance	\$0.00	\$0.00	
Other State Assistance	\$0.00	\$0.00	
Donations (Cash)	\$0.00	\$0.00	
Local Assistance	\$0.00	\$0.00	
Total Period Revenue	\$ 0.00	\$ 0.00	
Administrative Expenses	\$0.00	\$0.00	
Operating Expenses	\$0.00	\$0.00	
Capital Expenses	\$0.00	\$0.00	
Planning Expenses	\$0.00	\$0.00	
Total Agency Expenses	\$ 0.00	\$ 0.00	



requires agencies to input data such as service data (passenger one-way rides, elderly and disabled one-way rides, revenue service hours, and revenue service mileage), detailed revenue and expense information, volunteer and non-cash resources, accident data, fleet and equipment inventories, civil rights data, and more. For agencies that provide intercity bus service, a separate form is required.

- **Budget Detail Worksheet:** The Budget Detail Worksheet details a transit provider's spending over the past quarter, and includes operations, preventative maintenance, purchased service, planning and mobility management grants. The worksheet allows the state to carefully track spending by grant, and to ensure that projects are not being charged to multiple grant sources.

In addition to quarterly reporting, ODOT uses a web-based system called Oregon Public Transit Information System (OPTIS) to handle grant funding applications, award status, and reimbursement requests and history with its funding recipients. All data is tracked online and is therefore available at ODOT and agencies' fingertips as needed. The system is primarily designed to streamline the grant process, but also serves as a tracking method for financial data in general. Currently, agencies attach the Budget Detail Worksheet to their OPTIS reports; eventually, OPTIS developers may fully integrate data reporting addressed within the Budget Detail Worksheet into a single streamlined process.

Oregon

Best Practices

- Quarterly reporting cycle
- Electronic form submission
- Grant reporting to monitor spending
- Performance data used to evaluate transit services
- OPTIS online system streamlining data reporting and communication process for grants

Massachusetts Human Service Transportation

Massachusetts coordinates its human services transportation through a state office, the Human Services Transportation Office (HST), housed under the Executive Office of Health and Human Services. The HST office has subdivided the state into nine brokerage regions, each managed by an existing Massachusetts RTA. Some RTAs serve as brokers for multiple service areas, even ones in which they do not normally operate transit services.

Massachusetts HST manages a total budget of \$111 million annually, supported through three different human service programs. Collectively, the six RTA brokers manage over 300 private transportation carrier vendors across the state, providing more than 5 million trips each year for more than 37,000 consumers. Given the urgent need and specialized nature of many of these trips, it is imperative that the HST office receive timely, accurate data on trip reliability, safety and other performance measures.

The HST office requires its brokers to report system usage and costs and monitor performance benchmarks. Overall, HST compiles data to track the following statistics for its system:

- Total operating costs
- Consumer one-way trips
- Consumer trip expenditures
- Chair car trips
- Broker management expenditures
- Average direct service cost per trip
- Shared trips
- Consumers Served
- Local transportation providers
- Average broker management cost per trip
- Vehicles (including chair cars)
- Drivers
- Monitors



Brokers must submit monthly operations and revenue expenditure reports. Benchmarks used to evaluate system operations include:

- Consumer trips provided without a vehicle accident
- Service requests implemented within prescribed timelines
- Trips provided as scheduled
- On-time trips provided
- Trips provided without a serious vehicle complaint
- Trips provided without a serious driver/monitor complaint
- On-site service inspections

HST prepares an annual report on program performance to the MA Legislature. In addition, HST conducts annual reviews and site reviews of each brokerage, analyzes data trends and monitors monthly expenditures. The HST office and other EOHHS program offices also worked closely with the brokers to train them in operational and reporting requirements.

Summary of Best Practices

The examples presented above are only a few of the transit data collection and reporting practices that take place throughout the country. In most states, collecting data is a typical rather than an exceptional practice. However, the means of compiling data and the use of this data differs from state to state:

- **Regular collection and reporting of data.** Most states compile an annual summary of transit provider performance. These reports provide a useful means of comparison between providers, and allow data collected to be distributed in an easily understood product. While most require only annual reporting, some states such as Oregon collect data more frequently.
- **Type of data collected.** States vary in the level and type of data they collect from agencies. Data typically includes system characteristics, ridership and other performance data, fleet and other inventories, and budget details. However, one consistent practice is that states that collect data directly from their RTAs provide significant guidance and clear definitions of how data should be reported in order to minimize deviations among reporting entities and keep data consistent.
- **Piggybacking on NTD reporting aggregation levels.** By allowing transit operators to report data at least at the same level of disaggregation as they do for NTD, the burden of having to report data in two places can be reduced. For example, Washington State is able to reduce data processing steps for its operators by allowing operators to report data in terms of Directly Operated and Purchased Transportation, which is how services are reported to NTD, and then re-aggregating to the level desired by WsDOT after data collection is complete.
- **Use of Data in Decision Making.** Some states use data collected from RTAs as the basis for decision-making. Data is used by different states to:
 - provide transparency and accountability to the public
 - evaluate system (and even route-level) performance
 - measure trends over time
 - allocate funding
 - monitor and track grant status and reimbursement
 - report to key stakeholders on the progress of statewide transit services
 - justify spending and advocate for additional funds
 - ensure compliance with state and federal rules.

For example, Minnesota uses its data collection and reporting to guide funding decisions and provide technical assistance to transit operators with underperforming services. Its data reporting practices are ultimately conducted in the service of meeting its statewide goal to provide transit service to meet 90% of total need. Oregon, on the other hand, focuses on using its reporting to track financial data and manage grant processes, although it also collects operating data that in some ways parallels that reported to NTD, on a quarterly basis. Massachusetts HST collects a range of very detailed data that it



uses to carefully track service performance on an ongoing basis, which allows it to keep abreast of any challenges as they arise and address them swiftly.

- **Electronic data submission.** Data reporting is evolving toward more streamlined electronic formats. Other states, such as Washington and Oregon, have had success in collecting data electronically, which reduces the burden of reporting and streamlines the process. This allows the state to set a single reporting format that all transit operators must adhere to, and has the advantage of being more readily compiled at the state level. These systems can also help to organize and store transit provider data so that it is available in a central location.

CURRENT PRACTICE IN MASSACHUSETTS

MassDOT Data Collection

One of MassDOT's three primary goals reads as follows:

"Through a culture of innovation and accountability we will deliver the most efficient transportation services and information possible."³

MassDOT is also directed (by M.G.L. Chapter 6C) to collect certain information and data related to each of its divisions. These requirements include:

- The collection and reporting of performance criteria to be published in an annual scorecard, providing a progress report on project development and efforts to improve the effectiveness of service delivery.
- The collection of asset condition data to help oversee and coordinate the maintenance, preservation and investment in transportation facilities and equipment.

While most states collect data directly from transit agencies, MassDOT currently relies on data reported to the National Transit Database (NTD) to understand the services provided by the RTAs it funds. Rather than waiting for NTD to publish statistics more than one year hence, MassDOT does request that RTAs forward a copy of this data as it is reported to NTD. However, since there is no specific benefit to doing so—and no penalty for failing to do so—not all agencies forward their data. Moreover, even when RTAs do forward their data, there is no required or consistent format for this data; RTAs may submit their data in a format that is not easily compiled. As a result, MassDOT has an incomplete set of data that cannot easily be pooled for a complete picture of statewide operations. Furthermore, MassDOT has been inconsistent in the requests it makes to the RTAs for data – often asking for data that goes unutilized.

In 2009, MassDOT compiled a *2009 RTA Scorecard* of transit services based on FY2008 data submitted by the RTAs to NTD. This *Scorecard* ranked the 15 RTAs in terms of 12 performance and productivity measures, and also presented information on agency fleet and service area population (see also Figure 3):

- Unlinked Passenger Trips
- Vehicle Revenue Miles
- Vehicle Revenue Hours
- Operating Expenses
- Fare Revenues
- Fare Revenues per Passenger Trip

³ MassDOT 90-Day Integration Report: www.eot.state.ma.us/downloads/90_DayReport/IntegrationReport_0909.pdf



- Operating Expenses per Passenger Trip
- Fare Revenues per Mile
- Operating Expenses per Mile
- Fare Revenue per Hour
- Operating Expenses per Hour
- Farebox Recovery Ratio
- Vehicles Available for Maximum Service
- Population in Service Area
- Ridership per Capita

The *Scorecard* provided a snapshot of 2008 performance that indicated that there is a very wide range of performance among RTAs. However, beyond providing a public snapshot of RTA performance, the *Scorecard* did not include any analysis of results nor use the data as a basis in any decision-making.

MassDOT has also recently begun to informally collect information regarding fleet and equipment replacement needs as part of the annual RTA Capital Program funding allocation process. It is hoped that more reliable information can be collected on a permanent basis and used as part of a more equitable and needs-based capital funding allocation process in the future. But previous attempts at addressing this issue were inconsistent and constantly shifting.

RTA Reporting

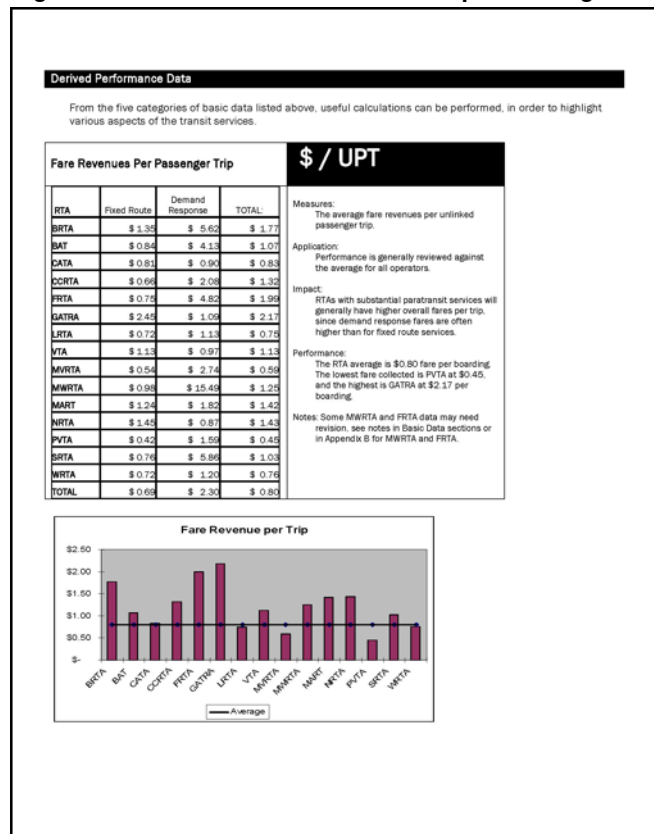
Each Massachusetts RTA must prepare an annual report covering operations from the prior fiscal year, as directed in their enabling legislation (M.G.L. Chapter 161B). These reports are submitted to the Secretary of Transportation and to the MA Legislature. Some RTAs (e.g. PVRTA, MVRTA, NRTA and VTA) post a copy on their websites. These reports are fairly general, and usually report only summary level data, less detailed than the level required for NTD reporting. RTAs also report annually to the State Treasurer on the net cost of service and any excess funds.

As detailed earlier, RTAs that are recipients of federal funding must also report to NTD on an annual basis in accordance with federal law. However, the review and compilation of this data as part of the effort to publish individual RTA profiles as part of this Beyond Boston study has identified some inconsistencies and limitations within these datasets. These concerns are described below.

Limitations & Concerns Related to NTD Reporting

In theory, NTD is designed to provide a consistent, comparable set of data for all transit services in the country. NTD reporting is subject to a lengthy set of rules designed to ensure that the data received accurately represent agencies' services and assets, in order to ensure that FTA funds can be apportioned accurately and fairly. Because of the burden of NTD reporting, however—particularly for smaller agencies, who have relatively limited staff resources—a number of compromises are made. At a macro level—at the level needed by FTA to conduct its apportionment activities—these compromises are likely relatively unimportant. Indeed, since all agencies are subject to the same rules, any variations in reporting practices are likely evenly distributed across the country.

Figure 3 2009 RTA Scorecard Example Ranking





However, these compromises limit the usefulness of NTD data at the local and state level. Of particular relevance to Massachusetts, agencies are permitted within NTD rules to combine data for different types of services. For example, this limits the ability of MassDOT to objectively and fairly compare data across RTA programs, such as fixed route services or demand response trips, or to distinguish the specific services being supported through MA contract assistance. More specifically, these issues are manifested as follows:

Blending of Data for Different Types of Service

A few of the Massachusetts RTAs manage several different types of transportation services and currently blend this data. (e.g. ridership, fares, revenue hours and miles) when reporting to NTD. These services may include intercity bus operations that benefit from federally subsidized vehicle purchases, or specially contracted services with universities. For example, according to NTD data, PVRTA's ridership appeared to surge from just under 3 million riders to just under 11 million riders (or 365%) between 2000 and 2001. This ridership jump was not an actual ridership increase; instead, it was caused by a reporting change wherein PVRTA began to report data from its services provided to the University of Massachusetts-Amherst in 2001. Some RTAs have other partially subsidized services operating within their areas, such as intercity bus service, and include related mileage and fare data in their NTD reports. For example, GATRA provides the federal match for intercity coach purchases and leases these buses to several private carriers; mileage and fare data from these services is included in GATRA's NTD reporting. Although this is permitted according to NTD reporting guidelines, it significantly skews the overall apparent performance of each RTA and means that what appears on its face to be comparable data is actually not comparable.

Blending Brokered Human Service Transportation Data with RTA Services

Some RTAs serve as HST brokers under contract with the Massachusetts Executive Office of Health and Human Services. Not every RTA is a broker, and some RTAs provide brokerage services for large swathes of the state. For example, CCRTA provides brokerage for its own service area plus Nantucket and Martha's Vineyard, and MART provides brokerage service for a large amount of the interior portion of the state, far beyond its own service area. Some of the agencies providing HST brokerage blend mileage, hours, ridership and fares for these services with data for all other demand-responsive services. This means that data for relatively contained ADA services, for example, is mixed in with data for these much more expansive programs. Furthermore, this data is often combined inconsistently—for example, HST operating costs are not reported, but ridership numbers are included in demand-response reports, and HST reimbursements are reported as demand-response fare revenue. As a result, ridership and revenue is overreported and operating costs are underreported.

With Massachusetts RTAs reporting data using different methodologies it is difficult for MassDOT or the public to examine the RTAs fairly and objectively. For example, in compiling individual RTA profiles at the outset of the Beyond Boston study, significant revisions had to be made to NTD data from many of the providers. In the end, it was necessary to draw on data provided directly by RTAs and make a number of data corrections in order to compile a consistent set of data about each agency.

Outdated Data

While agencies are required to report their data to NTD within 120 days of the end of their fiscal year, MassDOT does not always have access to this data until it is available publically, which is typically almost a full calendar year later. As previously mentioned, while MassDOT requests that agencies forward their NTD reporting data as soon as it is entered, it is not mandated and the degree to which it is actually done is uneven. This means that data available to the state and peer RTAs is not up to date.



Non-Reporting Agencies

While most Massachusetts RTAs report their data to NTD, three agencies are not required to do so: FRTA, VTA, and NRTA. This is because these agencies are not direct FTA funding recipients, and are therefore exempt from NTD reporting requirements. Furthermore, new NTD reporting requirements offer a waiver for agencies who operate 30 or fewer vehicles in maximum service, meaning that these smaller agencies are not required to report to NTD. Currently, two Massachusetts RTAs operate 30 or fewer vehicles and would theoretically qualify for this waiver: NRTA and CATA. CATA currently reports to NTD; NRTA does not report to NTD due to its status as a funding sub-recipient.

Summary of Current Practice in Massachusetts

As a result of its minimal operating and financial data reporting requirements, MassDOT has limited and relatively unreliable information on which to evaluate the effectiveness of taxpayer investments in the statewide transit system, or to make decisions related to statewide transit initiatives. The lack of information challenges MassDOT's ability to make data-driven decisions.

Furthermore, because data reported to NTD often represents a blend of services, it is an inaccurate tool for assessing and comparing the effectiveness of service offered by each RTA or for identifying where resources are most needed. It also hinders the ability of RTAs to understand how their peers are managing different types of services and to learn from each other's experiences. It is challenging to identify the costs and benefits of different service delivery options without having accurate data on the effectiveness of existing operations.

As currently structured, NTD reporting may become less useful to MassDOT as RTAs continue to diversify their service offerings. It will become more challenging for MassDOT to understand the effectiveness of specific programs and services when reviewing broad data categories within NTD. Although it is possible that NTD will refine its reporting definitions to accommodate these changes, it must also balance the desire to collect finely-grained data with the need to keep reporting burdens reasonable on a national basis. In the past, this has led NTD to make compromises.

The ultimate goal of a successful dataset should be to provide data at a sufficiently detailed level to allow accurate, valid comparisons among services and over time. Improving the standard of reporting, and making reporting simpler for all parties involved will assist in identifying opportunities to improve service delivery across the Commonwealth, and aid in the advocacy for further RTA funding.

POTENTIAL IMPROVEMENTS IN MASSACHUSETTS

MassDOT needs to have current data readily available to properly carry out the oversight and coordination roles it has been assigned under M.G.L. Chapter 6C. It is common practice at other state DOTs to collect and publicly report statewide transit data from individual operators. This data is used to evaluate system (and even route-level) performance, allocate funding, provide transparency and accountability to the public, measure trends over time, and report to key stakeholders on progress in achieving statewide transit goals.

All but three of the 15 RTAs already prepare detailed annual data reports to NTD. These data collection and compilation activities take place at virtually every transit operator in the country, and are a fundamental component of transit service operations. Indeed, most RTAs already collect data in disaggregated formats, and re-aggregate it in order to report to NTD. Some adjustment and refinement would be necessary to compile the data in an effective, sufficiently detailed format, but the overall burden should be relatively low if reporting guidance is clear and consistent and MassDOT serves in a supportive role. In fact, MassDOT can even structure its data collection activities to support RTAs' NTD reporting requirements by developing a tool that will help RTAs to package data for both purposes simultaneously.

Key points to consider include:



- **Data accuracy.** MassDOT needs to have accurate data to understand individual systems and geographic distributions of transit service and need. To do this, it must ensure that data is reported correctly (e.g. broken down by service type, brokered HST trips get reported in the appropriate RTA service area rather than by brokerage, etc.).
- **Data consistency.** Data must be consistent across all RTAs and properly classified by service type (e.g. Fixed Route, DR, HST, intercity/partially subsidized services, etc.). *Initiative 1 – Develop Service Standards & Guidelines* discusses the various classification systems used by different states to collect performance data. Because there are only 15 RTAs (much fewer than in many other states), it should be possible to develop a tool that can address every possible transit service type within the state.
- **Clear definition of services and terms.** Services should be considered a different mode if they meet a specific criteria; criteria should be developed, for example, to separate Human Service Transportation, Council on Aging trips and ADA paratransit services. These criteria and definitions should be refined over time as services evolve within the state to ensure that service type categories are comparable.
- **Fulfillment of reporting obligations.** Most importantly, MassDOT needs to fulfill M.G.L. Chapter 6C reporting requirements related to performance criteria requirements and asset condition, and support the agency's goal to provide effective information.
- **Keep things simple.** While accurate and consistent data is essential, data reporting can be burdensome. As stated above, most RTAs already collect data in disaggregated formats, and re-aggregate it in order to report to NTD. Thus, the effort that will be required can be minimized by ensuring that more detailed data can be “rolled-up” into NTD categories, and the same deadlines are used as for NTD reporting.
- **Ease of Reporting.** MassDOT and the RTAs must work together to ensure that barriers to data reporting are low, ensuring full participation and timeliness. Using an online tool that submits reports to MassDOT, and allows RTAs to collect required NTD data would be the most effective.

Actions to Consider

Potential improvements—for discussion at the March workshop—to address the above issues include:

1. What sort of data reports or annual submissions should MassDOT require?
2. How should data be reported? What sort of guidelines or tools would be useful for the RTAs?
 - Should MassDOT develop a program handbook and/or data reporting guidelines?
 - Would development of a data collection instrument/format (e.g. a spreadsheet) be the best way to collect consistent data from all RTAs? What type is most appropriate, easy to use, and effective?
 - Would an online reporting mechanism be the most straightforward for RTA use?
 - What penalties should be established to ensure that all agencies provide data in a timely fashion?
3. What might be the most appropriate categories for data collection by service type?
 - Fixed Route, DR, HST, intercity/partially subsidized services?
 - Ensure categories are consistent with NTD (can “roll up into” NTD categories)?
 - Should data on service quality be collected?
4. How can MassDOT support RTA reporting?
 - Is it easier and more appropriate to report monthly? quarterly? annually?
 - Hold training/workshops in how to report?
 - Design state reporting requirements to directly facilitate the reporting of NTD data, by aggregating and organizing data in such a way that it is “ready for input” into NTD’s online reporting system in the format required.



5. How can MassDOT ensure data and other reporting is consistent and fair?
 - Periodic audits by State Auditor?
 - Periodic reviews of individual RTAs by MassDOT staff?
6. What might data be used for?
 - Publish Scorecard/provide transparency to the taxpayer?
 - More comprehensive reports, such as overviews of RTA services to inform key stakeholders such as the Legislature, communities, and the public?
 - Funding allocation?
 - Funding incentives?
 - Application of minimum service standards?

FOR MORE INFORMATION

Federal Transit Administration's National Transit Database:

www.ntdprogram.gov/

Reporting Guidelines and Forms, Oregon DOT Public Transit Division:

www.oregon.gov/ODOT/PT/reporting/index.shtml

State DOT Public Transportation Performance Measures: State of the Practice and Future Needs. NCHRP Research Results Digest, Issue 361, September 2011:

onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rrd_361.pdf

Washington State Summary of Public Transportation – 2010 Report, Washington State DOT:

www.wsdot.wa.gov/publications/manuals/fulltext/m0000/TransitSummary/2010PTSummary.pdf

2009 RTA Scorecard, MassDOT.

<http://www.massdot.state.ma.us/portals/0/docs/infoCenter/scorecards/RTAScorecardDec09.pdf>

2011 Transit Report: A Guide to Minnesota's Public Transit Systems. Minnesota DOT:

www.dot.state.mn.us/transit/reports/transitreports/11/index.html